Practice: 328 - Conservation Crop Rotation

Scenario: #1 - Standard Rotation

# **Scenario Description:**

The producer implements a planned rotational cropping sequence as part of a conservation management system to reduce soil erosion, maintain or improve soil organic matter, balance nutrients, and manage plant pests. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each crop will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 100 acre field. The system is planned to complement the cropping system so there should be no loss in crop income.

Associated Practices: Residue and Tillage Management - No-Till/Strip Till/Direct Seed (329), Contour Farming (330), Cover Crop (340), Residue and Tillage Management - Seasonal (344), Residue and Tillage management - Mulch-Till (345), Residue and Tillage Management - Ridge Till (346), Mulching (484), Forage Harvest Management (511), Stripcropping (585), Nutrient Management (590), Integrated Pest Management (595).

## **Before Situation:**

Year-after-year production of either the same crop or a low-residue producing crop rotation has caused soil quality degradation, nutrient depletion, and low soil organic matter. The producer meets the nutrient deficit through additional soil additives.

# **After Situation:**

The producer implements a planned rotation sequence to manage the nutrient needs. A high residue and/or nitrogen-fixing crops crop are typically planted in the rotation. The planned rotation improves soil quality, reduces soil additives needed, builds organic matter in the soil, and helps to break pest cycles. The system is planned to complement the cropping system so there is no loss in crop income. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each grown will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 100 acre conventional field.

Scenario Feature Measure: Acres Planted

Scenario Unit: Acre

Scenario Typical Size: 100

Scenario Cost: \$1,805.60 Scenario Cost/Unit: \$18.06

Cost Details (by category):

				Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Labor						
Supervisor or Manager		Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$45.14	40	\$1,805.60

D....

Practice: 328 - Conservation Crop Rotation Scenario: #2 - Organic Standard Rotation

# **Scenario Description:**

The producer implements a planned rotational cropping sequence on an organic or transitioning to organic farm as part of a conservation management system to reduce soil erosion, maintain or improve soil organic matter, balance nutrients, and manage plant pests. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each crop will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 75 acre organic field. The system is planned to complement the cropping system so there should be no loss in crop income.

Associated Practices: Residue and Tillage Management - No-Till/Strip Till/Direct Seed (329), Contour Farming (330), Cover Crop (340), Residue and Tillage Management - Seasonal (344), Residue and Tillage management - Mulch-Till (345), Residue and Tillage Management - Ridge Till (346), Mulching (484), Forage Harvest Management (511), Stripcropping (585), Nutrient Management (590), Integrated Pest Management (595).

#### **Before Situation:**

Year-after-year production of either the same crop or a low-residue producing crop rotation has caused soil quality degradation, nutrient depletion, and low soil organic matter. The producer meets the nutrient deficit through additional soil additives.

## **After Situation:**

The producer implements a planned rotation sequence on an organic or transitioning to organic farm to manage the nutrient needs. A high residue and/or nitrogen-fixing crops crop are typically planted in the rotation to provide nutrients for subsequent crops and improve soil organic matter. The planned rotation improves soil quality, reduces soil additives needed, builds organic matter in the soil, and helps to break pest cycles. The system is planned to complement the cropping system so there is no loss in crop income. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each grown will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 75 acre organic field.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 75

Scenario Cost: \$2,031.30 Scenario Cost/Unit: \$27.08

Cost Details (by category):

				Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Labor						
Supervisor or Manager		Labor involving supervision or management activities.	Hour	\$45.14	45	\$2,031.30
		Includes crew supervisors, foremen and farm/ranch				
		managers time required for adopting new technology, etc.				

D..: - -

Practice: 328 - Conservation Crop Rotation Scenario: #3 - Specialty Crops Rotation

# **Scenario Description:**

The producer implements a planned rotational cropping sequence for specialty crops (high value fruits and vegetables) as part of a conservation management system to reduce soil erosion, maintain or improve soil organic matter, balance nutrients, and manage plant pests. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each crop will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 50 acre specialty crop field. The system is planned to complement the cropping system so there should be no loss in crop income.

Associated Practices: Residue and Tillage Management - No-Till/Strip Till/Direct Seed (329), Contour Farming (330), Cover Crop (340), Residue and Tillage Management - Seasonal (344), Residue and Tillage management - Mulch-Till (345), Residue and Tillage Management - Ridge Till (346), Mulching (484), Forage Harvest Management (511), Stripcropping (585), Nutrient Management (590), Integrated Pest Management (595).

#### **Before Situation:**

Year-after-year production of either the same crop or a low-residue producing crop rotation has caused soil quality degradation, nutrient depletion, and low soil organic matter. The producer meets the nutrient deficit through additional soil additives.

## **After Situation:**

The producer implements a planned rotation sequence for specialty crops to manage the nutrient needs. A high residue and/or nitrogen-fixing crops crop are typically planted in the rotation to provide nutrients for subsequent crops and improve soil organic matter. The planned rotation improves soil quality, reduces soil additives needed, builds organic matter in the soil, and helps to break pest cycles. The system is planned to complement the cropping system so there is no loss in crop income. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each grown will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 50 acre field.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 50

Scenario Cost: \$2,257.00 Scenario Cost/Unit: \$45.14

Cost Details (by category):

				Price		
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities.	Hour	\$45.14	50	\$2,257.00
		Includes crew supervisors, foremen and farm/ranch				
		managers time required for adopting new technology, etc.				

D..: - -

Practice: 328 - Conservation Crop Rotation
Scenario: #4 - Organic Specialty Crops Rotation

# **Scenario Description:**

The producer implements a planned rotational cropping sequence for organic specialty crops (high value fruits and vegetables) as part of a conservation management system to reduce soil erosion, maintain or improve soil organic matter, balance nutrients, and manage plant pests. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each crop will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 35 acre organic specialty crop field. The system is planned to complement the cropping system so there should be no loss in crop income.

Associated Practices: Residue and Tillage Management - No-Till/Strip Till/Direct Seed (329), Contour Farming (330), Cover Crop (340), Residue and Tillage Management - Seasonal (344), Residue and Tillage management - Mulch-Till (345), Residue and Tillage Management - Ridge Till (346), Mulching (484), Forage Harvest Management (511), Stripcropping (585), Nutrient Management (590), Integrated Pest Management (595).

#### **Before Situation:**

Year-after-year production of either the same crop or a low-residue producing crop rotation on an organic farm has caused soil quality degradation, nutrient depletion, and low soil organic matter. The producer meets the nutrient deficit through additional soil additives.

## **After Situation:**

The producer implements a planned rotation sequence for organic specialty crops to manage the nutrient needs. A high residue and/or nitrogen-fixing crops crop are typically planted in the rotation to provide nutrients for subsequent crops and improve soil organic matter. The planned rotation improves soil quality, reduces soil additives needed, builds organic matter in the soil, and helps to break pest cycles. The system is planned to complement the cropping system so there is no loss in crop income. A planned rotational cropping system includes the planned crop sequence, total length of rotation, crop types grown, and the length of time each grown will be grown. The producer typically attends training to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 35 acre field.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 35

Scenario Cost: \$2,482.70 Scenario Cost/Unit: \$70.93

Cost Details (by category):

Price						
Component Name	ID	Component Description	Unit	(\$/unit)	Quantity	Cost
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities.	Hour	\$45.14	55	\$2,482.70
		Includes crew supervisors, foremen and farm/ranch				
		managers time required for adopting new technology, etc.				